

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) ~~High-A high~~ pressure sodium lamp having a nominal power  $P_{la}$ , ~~which is suitable to be operated at a very high frequency (VHF),~~ having a discharge tube with a ceramic wall and an internal vessel diameter  $D_{int}$ , enclosing a discharge space in which a pair of electrodes at a mutual electrode distance  $ed$  and a filling of Na-amalgam with a sodium mol fraction (smf), ~~characterized in that the discharge tube has a ratio  $ed/D_{int}$  between about 5.5 and 4.0~~ a ratio of the internal discharge vessel diameter  $D_{int}$  to the nominal lamp power  $P_{la}$  being substantially in a range of  $0.045 \leq D_{int}/P_{la} \leq 0.08$ .

2.(Currently Amended) ~~Lamp according to claim~~ The high pressure sodium lamp 1, ~~characterized in that wherein a thickness of the wall thickness~~ (wt) is  $0.4 \leq wt \leq 0.6$  mm.

3.(Currently Amended) ~~Lamp according to~~ The high pressure sodium lamp claim 1, ~~characterized in that wherein~~ the lamp has a

wall load of at most  $30 \text{ W/cm}^2$ .

4. (Currently Amended) ~~Lamp according to claim 1,~~  
~~characterized in that: A high pressure sodium lamp having a nominal~~  
~~power  $P_{la}$ , and comprising:~~

a discharge tube with a ceramic wall and an internal vessel  
diameter  $D_{int}$ , enclosing a discharge space;

a pair of electrodes at a mutual electrode distance  $ed$ ; and  
a filling of Na-amalgam with a sodium mol fraction (smf)  
substantially in a range of  $0.6 < \text{smf} < 0.75$ , wherein the discharge  
tube has a ratio  $ed/D_{int}$  between about 5.5 and 4.0;

[[ - ]] a ratio of the mutual electrode distance  $ed$  to the  
nominal power  $P_{la}$  being substantially in a range of  $0.2 \leq ed/P_{la} \leq$   
0.35; and

[[ - ]] an amalgam composition with  $0.6 < \text{smf} < 0.75$ ;

[[ - ]] the a ratio of the internal discharge vessel  
diameter  $D_{int}$  to the nominal lamp power  $P_{la}$  is being substantially in  
a range of  $0.045 \leq D_{int}/P_{la} \leq 0.08$ ;

[[ - ]] the wall thickness (wt) is  $0.4 \leq \text{wt} \leq 0.6 \text{ mm}$ .

5. (Currently Amended) ~~Lamp~~ The high pressure sodium lamp  
according to claim 1, ~~characterized in that~~ wherein the filling  
~~also further~~ comprises Xe having a pressure at room temperature in

the range of  $400 \text{ mbar} \leq p_{Xe} \leq 1000 \text{ mbar}$ .

6.(Currently Amended) ~~Lamp~~The high pressure sodium lamp according to claim 1, ~~characterized in that wherein~~ the electrodes are provided with emitter and ~~that wherein~~ each of the electrodes has an electrode diameter, which specified relatively to the average lamp current ( $I_{la}$ ) at nominal lamp power fulfils the relation:  $0.2 < (D_{\text{electrode}})^2 / I_{la} < 0.45$ , ~~preferably~~  $0.25 < (D_{\text{electrode}})^2 / I_{la} < 0.35$ .

7.(Currently Amended) ~~Lamp according to~~The lamp of claim 1, ~~characterized in that wherein~~ the lamp emits light in nominal operating condition with a color temperature  $T_c$  of at most 2500K.

8.(Original) A lighting system comprising a full electronic VHF driver for operating a lamp according to claim 1.

9.(Currently Amended) ~~A~~The system according to claim 8, wherein the VHF ballast is provided with resonant ignition means by which resonant ignition is applied on igniting the lamp.

10.(New) The high pressure sodium of claim 1, wherein a ratio of the mutual electrode distance  $ed$  to the nominal lamp power  $Pl_a$  is substantially in a range of  $0.2 \leq ed/Pl_a \leq 0.35$ .

11.(New) The high pressure sodium of claim 1, wherein the Na-amalgam has a sodium mol fraction (smf) substantially in a range of  $0.6 < \text{smf} < 0.75$ .

12.(New) The high pressure sodium of claim 1, wherein the discharge tube has a ratio  $\text{ed}/D_{\text{int}}$  substantially between about 5.5 and 4.0.

13.(New) The high pressure sodium lamp 4, wherein a thickness (wt) of the ceramic wall is substantially between  $0.4 \leq \text{wt} \leq 0.6$  mm.

14.(New) A high pressure sodium lamp having a nominal power  $P_{\text{la}}$ , and comprising:

a discharge tube with a ceramic wall and an internal vessel diameter  $D_{\text{int}}$ , enclosing a discharge space;

a pair of electrodes at a mutual electrode distance  $\text{ed}$ ; and  
a filling of Na-amalgam;

a ratio of the mutual electrode distance  $\text{ed}$  to the nominal lamp power  $P_{\text{la}}$  being substantially in a range of  $0.2 \leq \text{ed}/P_{\text{la}} \leq 0.35$ .

15.(New) The high pressure sodium of claim 14, wherein a

ratio of the internal discharge vessel diameter  $D_{int}$  to the nominal lamp power  $Pl_a$  is substantially in a range of  $0.045 \leq D_{int}/Pl_a \leq 0.08$

16.(New) The high pressure sodium of claim 14, wherein the Na-amalgam has a sodium mol fraction (smf) substantially in a range of  $0.6 < smf < 0.75$ .

17.(New) The high pressure sodium of claim 14, wherein the discharge tube has a ratio  $ed/D_{int}$  substantially between about 5.5 and 4.0.

18.(New) The high pressure sodium lamp 14, wherein a thickness (wt) of the ceramic wall is substantially between  $0.4 \leq wt \leq 0.6$  mm.